

The Mesozoic of the Central Belt of Malay Peninsula — Part I: Stratigraphy and depositional sequence

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The Central Belt of the Malay Peninsula is a loosely defined geologic terrain which display distinct geographical and geological characteristics. The geology of the Central Belt may be defined by the north-south trending fault zones of Bentong-Raub and Lebir, the Late Palaeozoic to Mesozoic stratigraphic succession, the bounding unconformities, the north-south trending granite ranges, Mesozoic volcanism and also probably the presence of serpentinites.

The Mesozoic stratigraphy of the Malay Peninsula have been grouped into two megasequences which are bounded by regional unconformities. These megasequences are the largely Triassic Semanggol-Semantan megasequence and the Jurassic-Cretaceous Tembeling Megasequence. Based on the structural, magmatic, geochronological, palaeontological and stratigraphic data available, four time-slice sections and paleogeographic maps for the Mesozoic stratigraphic succession can be reconstructed. These are:

- (i) Permian to Early Triassic section;
- (ii) Middle Triassic section;
- (iii) Late Triassic section;
- (iv) End of Triassic to Cretaceous section.

The Middle to Upper Permian paleogeography consist of a warm shallow marine environment with widespread volcanic activities and volcanic islands which display close resemblance to some areas in Japan today. The Early Triassic rock distribution to indicate that along the margin of the Central Belt, sedimentation was strongly influenced by steep slopes that could have developed during basin extension.

The Middle Triassic paleogeography is characterised by the 'flysch' Semantan Formation, which indicate the domination of deep water environment with pronounced volcanism.

The Late Triassic times witness a gradual change from a deep marine environment to shallow water conditions, which is reflected in the increase in the proportion of conglomerates, limestones lenses and tuff beds.

The Indosinian Orogeny of Southeast Asia marks the end of Late Triassic marine, flysch-type sedimentation and the beginning of the predominantly continental Jurassic-Cretaceous sedimentation. However, the evidences available indicate that this orogeny is not of mountain building proportion. The Jurassic-Cretaceous paleogeography begins with a shallow marine environment, which swiftly gave way to the continental regime of the Tembeling times.